

## ABSTRACT

The present invention is directed to a peptide or polypeptide comprising an Fv molecule, a construct thereof, a fragment of either, or a construct of a fragment having enhanced binding characteristics so as to bind selectively and/or specifically to a target cell in favor of other cells, wherein the binding selectivity or specificity is primarily determined by a first hypervariable region, and wherein the Fv is a scFv or a dsFv, and optionally having one or more tags. The enhanced binding is directed to a substantially exposed and/or over-expressed binding site on or in a target comprising a cell in favor of other cells on or in which the binding site is not substantially available and/or expressed. The invention is further directed to a method for isolating such peptides and polypeptides from a phage display library and to the nucleic acid molecules encoding them. The invention provides for a pharmaceutical composition comprising the peptide or polypeptide and kits for diagnosis and treatment of disease, specifically cancer, most specifically acute myeloid leukemia.